

## REMARKS

This is in response to the Office Action mailed on November 6, 2002 in regard to the above-identified patent application. Claims 1, 4 and 6 have been amended to more clearly describe Applicant's invention. Claim 11 has been added. Claims 1-11 are pending in the present case. Support for the newly added claim can be found in the application as filed.

### 35 USC §112 REJECTION

The Examiner has rejected Claim 10 under 35 USC 112, second paragraph. Applicant has amended Claim 10 to more accurately describe Applicant's invention. Applicant respectfully submits that this rejection has been overcome. While the Examiner did not specifically reject Claim 4, Applicant has also amended Claim 4 depicting the trademark TEFLON in all caps.

### 35 USC §102 & 35 USC §103 REJECTIONS

The Examiner rejected Claims 1-4, 6, 8 and 9 under 35 USC 102(e) as being anticipated by Larsen (US Pat No. 6,051,018) and Claims 7 and 10 under 35 USC §103(a) as being unpatentable over Larsen in view of Moss et al. (US Pat No. 5,810,803). It is respectfully submitted that the Examiner should withdraw these rejections.

Larsen discloses a hyperthermia apparatus having an energy radiating element comprising a leaky-wave antenna structure. More specifically, with reference to Figure 5, the antenna structure of Larsen consists of two conductors, an inner conductor 40 and an outer conductor 25, separated by a dielectric. As shown in Figure 5, the distal portion of outer conductor 25 consists of an aperture formed by openings. This leaky-wave antenna is "characterized by a surface wave which propagates along [the aperture] in outer conductor 25." See generally column 4, lines 41-54. It is the interaction between the inner conductor 40 and the aperture in outer conductor 25 which defines the electromagnetic field.

In contrast, the invention of Claim 1 specifically requires, in part, "a *monopole* antenna ... having a predetermined shape defining an outer emission surface from which electromagnetic energy is emitted ... wherein the predetermined shape of the *monopole* antenna results in the creation of a relatively uniform electromagnetic field pattern." (emphasis added) There is no teaching or suggestion in Larsen of using a monopole antenna having a predetermined shape to create a relatively uniform electromagnetic field pattern. Moreover, Larsen teaches away

from the use of a monopole antenna, stating "monopole antennas produce non-uniform radiation patterns." See generally Column 1, line 53 to Column 2, line 6. The present invention as claimed in Claim 1 solves this problem noted by Larsen; the antenna structure as claimed in Claim 1, incorporating a monopole antenna, produces a relatively uniform electromagnetic field. For the reasons set forth above, Applicant respectfully submits the rejection regarding Claim 1 has been overcome.

Applicant has amended Claim 6 in a similar manner as Claim 1. Since Larsen does not teach or suggest the use of a monopole antenna as claimed in Claim 6 and, otherwise, teaches away from the use of a monopole antenna, Applicant respectfully submits that the rejection regarding Claim 6 has been overcome.

Furthermore, since Claims 2-5 and 7-11 depend from Claim 1 and Claim 6, directly or indirectly, respectively, Applicant respectfully submits the rejections above regarding Claims 2-5 and 7-11 have been overcome.

The Examiner has also rejected Claims 1-10 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-48 of U.S. Patent No. 6,277,113. Please find enclosed herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). Applicant authorizes the Commissioner to deduct the small entity fee for such disclaimer as defined in CFR 1.20(d), \$55.00, from deposit account 50-1894. Applicant respectfully submits the rejection immediately above regarding Claims 1-10 has been overcome.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, as amended, is in condition for allowance. Early reconsideration and reexamination is respectfully requested.

Respectfully Submitted,

By:   
Ross M. Carothers  
Reg. No. 44,593

Date: 06 - MARCH - 03

AFx inc.  
47929 Fremont Blvd.  
Fremont, CA 94538  
(510) 651-7430  
(510) 623-4088 (FAX)